

Does labor demand influence time to the doctorate?

Jeffrey A. Groen

Universities have become more concerned in recent years about the time students take to complete a doctorate. The time required to obtain a Ph.D. varies widely among students within a given field. In the humanities, for instance, some students receive a Ph.D. in as little as 5 or 6 years while others take 11 or 12 years. Universities often see long times to the doctorate as problematic because of the large investments, including financial support to students, they make in graduate education.

In “[The impact of labor demand on time to the doctorate](#)” (*Education Finance and Policy*, winter 2016), Jeffrey Groen estimates whether labor demand influences time to the doctorate. Within a field, the demand for new Ph.D. recipients varies from year to year because the number of employers hiring and the number of positions available depend on macroeconomic conditions, state budgets, and university priorities. As a result, two students from the same Ph.D. program seeking jobs in consecutive years may face quite different sets of opportunities. Because of the difficulty of measuring labor demand, prior research on the factors that affect time to the doctorate has not adequately addressed the role of labor demand. In his article, Groen constructs a measure of labor demand on the basis of the annual number of job listings advertised through professional associations such as the American Economic Association.

The data on job listings that Groen uses cover a 30-year period and seven fields in the humanities and social sciences (anthropology, classics, economics, English, history, philosophy, and political science). After constructing the annual counts for each field from 1975 to 2005, Groen presents two pieces of evidence to demonstrate that the counts are a credible measure of demand for new Ph.D. recipients. First, the movements of the job-listings series over time are correlated with a set of variables—such as state appropriations and faculty salaries—that one expects would influence the demand for new Ph.D. recipients. Second, when the number of job listings in a field is larger than in other years, students in that field who earn the Ph.D. are more likely than students in other years to have definite plans for employment or postdoctoral study at the time of completion.

With this established, Groen uses the job-listings data together with student-level data on all doctorates awarded in the seven fields by U.S. universities over the 30-year period. These data come from the Survey of Earned Doctorates and record the number of years that each student took to earn the Ph.D., along with an array of characteristics of the student and the Ph.D. program. The student-level data and the job-listings data are combined (by field and year), and a discrete-time duration model is used to estimate the impact of labor demand on the timing of doctorate completion.

Theoretically, an increase in labor demand would raise the financial payoff to obtaining a Ph.D., thereby providing students an incentive to finish the Ph.D. sooner. However, students may not be completely free to adjust the timing of their completion. For instance, some faculty advisors may push students to complete their degrees without regard to labor demand in order to avoid a large number of almost-finished Ph.D. students in their program. Also, students may have difficulty obtaining an accurate assessment of current labor demand without engaging in a time-consuming job search.

The empirical estimates indicate that, holding other factors constant, the number of job listings in a field is not correlated with expected time to degree. One implication of this finding is that cyclical variation in labor demand is not responsible for observed changes over time in average time to degree within fields. This finding is relevant for university policies that set limits on the number of years that Ph.D. students may receive financial support from the university. The results imply that there is no empirical basis for adjusting those limits on the basis of the current level of labor demand. Universities concerned about long times to the doctorate can—instead of adjusting year limits in response to labor demand—make adjustments to factors, such as advising and financial support, that prior research suggests are related to time to the doctorate.